

From owner-qrp-l@netcom.com Tue Mar 14 23:55:52 1995
Date: Tue, 14 Mar 1995 18:09:03 -0800 (PST)
From: Art Moe <artmoe@agora.rdrop.com>
Subject: <didn't bother with a subject>
Message-Id: <Pine.3.87.9503141803.F29703-0100000@agora.rdrop.com>

Is WB8VGE on this list. If so could some one send his E-Mail address.

...--

73's

Arthur Moe	Oregon City, Or
A.R.S. KB7WW	45-19-22 N 122-36-37 W CN85
artmoe@agora.rdrop.com	At the end of the Oregon Trail

From owner-qrp-l@netcom.com Tue Mar 14 16:54:06 1995
Date: Tue, 14 Mar 1995 09:14:16 -0800 (PST)
From: H Smith <hbs@crl.com>
Subject: Re: aa7ar/sierra/M/qrp
Message-Id: <Pine.SUN.3.91.950314091135.9803A-1000000@crl12.crl.com>

On Mon, 13 Mar 1995 bruce.florip@amail.amdahl.com wrote:

> Hi all,
> Thought you fellow qrpers might be interested to know that I put the
> ... etc ...
>
> Now for the /M6/qrp part:
>
> ... more etc. ...
>

My kind of ham :-)

I will be listening for you!

CUL,

Smitty, NA5K/m/cw/qrp

Henry Smith (hbs@crl.com)

From owner-qrp-l@netcom.com Tue Mar 14 16:13:37 1995
Date: Tue, 14 Mar 95 15:09:23 EST

From: "Travis, Paul" <ptravis@mail.hq.faa.gov>
Message-Id: <9502147952.AA795222807@mail.hq.faa.gov>
Subject: Building with the NE-602

The first of a three part series on "Building Receivers With The NE-602" double-balanced modulator or mixer is featured in the Ham Radio column (page 78), of April 1995, Popular Electronics.

73, Paul K0PT

From owner-qrp-l@netcom.com Tue Mar 14 21:35:01 1995
From: PeterWK8S@aol.com
Date: Tue, 14 Mar 1995 15:35:20 -0500
Message-Id: <950314153512_49335380@aol.com>
Subject: Dayton QRP Banquet-Info

Hi gang,
The Dayton QRP Banquet is scheduled for Saturday April 29, 1995 at 8:00PM at the Days Inn South in Miamisburg, OH. Don't miss it! It's gonna be fantastic! Seating is limited so you must buy your tickets in advance. Send a SASE (self addressed and stamped envelope) and money order (prefered) or check for \$12.00 made out to:
Pete Meier
4181 Rural
Waterford, MI 48329
Attn: QRP Banquet Tickets

Now look what your 12 bucks brings:
Guest speakers include Ten Tec President and Founder Jack Burchfield K4JU and his Vice President of Sales Tom Salvetti KC3NF. NorCal's Wayne Burdick N6KR designer of the Sierra and NorCal 40.

Door Prizes from:

NorCal	Sierra Kit w/4 bands
Dave Benson NNIG	Small Wonder Labs 40-x Kit
Vibroplex	Brass Racer
A&A Engineering	Basic Keyer Kit
Kanga/G-QRP	Kanga kit, G QRP Circuit, Antenna Handbooks
Dan's Small Part...	to be determined
Hambrew	Project Enclosure, back issues
Ten Tec	to be determined

and possibly others... anyone else want to donate a prize?

Meal includes choice of Roast Beef, Baked Ham, Fried Chicken
Parsley Butter Potatoes, Cal. Blend Vegetables, 7 Layer Salad etc. etc.

So don't delay, don't miss out on a grand evening with great company!

73,72

Pete WK8S

From owner-qrp-1@netcom.com Tue Mar 14 13:32:28 1995
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>
Date: Tue, 14 Mar 1995 16:04:51 MET
Subject: FOX: No success on 17m
Message-Id: <4473E26333@daphne.rrze.uni-erlangen.de>

Hi gang,

> I'll be on 17m next sunday, March 12th, from 15:00 to 16:00 UTC. I'll be
> first on a frequency between 18.110 and 18.130 in SSB and later (second
> half) between 18.080 and 18.090 in CW. My code is a bit rusty, but
> you'll hear yourself :-)

Unfortunately the foxhunt didn't work at all. There was NO propagation to the United States. The band was pretty quiet but not completely dead. At one time there was a station from Israel booming in with 59 plus ten. But he was in a QSO and when I finally decided to give him a shout, he decided to go QRT in the very moment. In the second half on the CW frequencies there was even less activity. I guess I was the only station out there. I used the time for some keying practice :-)

I was running 5 watt out all of the time. On Saturday the weather luckily was fine enough so that I could climb on the roof to repair my homebrew two element delta loop. One of the wires was broken.

I might try it a second time and then I'll give notice more in advance.

72 de Richard Hieber, DL8MFQ/AA8CP
sz0026@daphne.rrze.uni-erlangen.de

PS: I saw my announcement at least three times via the list. Not my fault - I sent it out only once!

From owner-qrp-1@netcom.com Tue Mar 14 13:28:54 1995
Message-Id: <9503141346.AA26381@us1rmc.bb.dec.com>
Date: Tue, 14 Mar 95 08:46:19 EST
From: Bill Acito 14-Mar-1995 0839 <acito@asdg.enet.dec.com>
Subject: FS: Sony ICF-2010 Receiver

For Sale: Sony ICF-2010 General Coverage Receiver
FM Broadcast
Air Band

150Khz-30Mhz
Digital display, direct entry or manual tuning
Excellent condition, with original packaging and
documentation
I've been told this is the 'classic' short-wave receiver.

Nice receiver for a transmitter project, diagnostic tool, WWV,
etc.

\$200. I'll pay shipping in the US.

. - I own my own words -

Bill Acito
acito@asdg.enet.dec.com

|d|i|g|i|t|a|l|
Digital Semiconductor - Fab 6
Hudson, MA

kc1gs (qrp-ne #260, arrl life)

From owner-qrp-l@netcom.com Tue Mar 14 14:00:58 1995
Message-Id: <199503141344.AA13895@marcel.gamekeeper.bellcore.com>
Subject: Help with a Mod
Date: Tue, 14 Mar 95 08:45:05 EST
From: "Luis R. Anaya" <papo@gamekeeper.bellcore.com>

Greetings:

I got this old Conar Transmitter for 15 bucks. Although it is a QRO
Transmitter, I would like to ask the following because QRP ops have
most experience working with Homebrew equipment that the rest :).

This beast is xtal controlled and it has one xtal on 7.140Mhz, which
is ok 'cause the amount of time I spend doing CW is 0 when the limit
goes to infinity. Now that I have a xtal, What would be an easy
way to plug a gadget box and being able to modify the xtal frequency
to go across the 40 meter spectrum??? The Conar can also handle 15 and
80 Meters. Maybe with the approximate crystal/circuit combo
I might be able to create other gadget's boxes for them too.

At least it has a convenient way to plug on the front. I just have to put
this variable crystal box and plug it in, but I do not know how I would
do such thing. Could some kind soul point me to the right direction???

Thanks,

--

Luis Roberto Anaya-Rivera papo@donuts0.bellcore.com
A True PL/1 Hacker papo@briscas.gamekeeper.bellcore.com
Bellcore, NJ Ham: N2ZXE+

From owner-qrp-1@netcom.com Tue Mar 14 14:01:26 1995
From: ab4el@cybernetics.net (Stephen Modena)
Message-Id: <9503141239.AA09217@cybernetics.net>
Subject: Re: Length-in-feet Formula
Date: Tue, 14 Mar 1995 07:39:41 -0500 (EST)

I received this...which makes me think I should have worded my
posting better.

> Steve, I saw your post concerning using a 40M dipole for a 2M
> antenna. Just have one question, what is the "N" in the formula,
> and where did you find this referenced. I am always searching for
> additional antenna ideas and would like to understand this concept.
>
> ----- Length-in-feet = (0.95 + N) * 492 / Freq-in-MHz -----
>
> 73 KC5DVT Wayne email...ehayes@vnet.ibm.com

The reference is "The ARRL Antenna Book" ...harmonic antennas. Or look
in the ARRL Handbook.

Allow me to correct my formula ("formula" means an empirical calculation
method).

$$\text{Length(feet)} = (N - 0.05) * 492 / \text{Freq-in-MHz}$$

This is the formula for "harmonic" antennas. Now I will illustrate the
role of "N". N is the harmonic number.

I want to make an antenna for 40 M...specifically for 7.00 MHz. Because
this is the fundamental frequency (1st harmonic), N=1.

$$\begin{aligned} L &= (1 - 0.05) * 492 / 7.00 && \text{(because } N=1\text{)} \\ L &= 0.95 * 492 / 7.00 \\ L &= 468 / 7.00 && \text{(Is "468" familiar?)} \\ L &= 66.86 \text{ ft} \end{aligned}$$

I cut the wire and erect the dipole.

I decide to use this 40 M dipole on 15 M because at 3-halfwaves operation

it's feed point will be a current null. Let's calculate the resonant freq of this 40 M dipole. N=3 because this is 3rd harmonic. ($7 \times 3 = 21$)

$L = (3 - 0.05) \times 492 / \text{Freq}$ (because $N=3$, $7 \text{ MHz} \times 3 = 21 \text{ MHz}$)
 $\text{Freq} = (3 - 0.05) \times 492 / \text{Length}$ (did you follow the rearrangement?)
 $\text{Freq} = 2.95 \times 492 / 66.86$ (wire antenna already exists)
 $\text{Freq} = 21.71 \text{ MHz}$

Ooops...the 40 M dipole appears to be "too short." :^) Not to worry if you are using a "good" TransMatch.

Let's see how long a three halfwaves antenna would be on 21 MHz.

$L = 2.95 \times 492 / 21.00 = 69.11 \text{ ft}$

And what is the "40 M" resonant frequency of that antenna?

$69.11 = 0.95 \times 492 / \text{Length}$
 $L = 468/69.11 = 6.76 \text{ MHz}$

Will it help to make the original antenna shorter on 40 M? Let cut one for the other end of the band: 7.3 MHz.

$L = (1-0.05) \times 492 / 7.3 = 64.03 \text{ ft}$
 $\text{Freq} = (3-0.05) \times 492 / 64.03 = 22.67 \text{ MHz}$

Twice we have proved that when we intend to operate a 40 M antenna intensively on both 40 M and 15 M, we perhaps should make a compromise is the direction of cutting to the low end of 40 M...or even below.

Why?

Because I use a MFJ cheapy "fix-taps" TransMatch...and it is problematic to tame the "SWR" on 15 M, the shorter the antenna is on 40 M.

If you have a *nice* roller inductor-type TransMatch, it really doesn't matter what you cut your antenna to...you will always be able to find a setting to achive 1:1 "SWR". :^)

Hint: I put "SWR" in quotes, so no flame wars please. ;^) A transmatch device TRANSforms a presented impedance to achieve a MATCH....which we usually determine via an SWR meter at the transmitter coaxial plug.

Now, does one need to be concerned with whether the *particular* 40 M antenna is actually even-harmonic or odd-harmonic length on 2 M? I think not. I believe *other* factors come into dominant play and make it moot.

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From owner-qrp-1@netcom.com Tue Mar 14 23:29:10 1995
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: New President for ARCI
Date: Tue, 14 Mar 95 19:40:42 EST5EDT
Message-Id: <1995Mar14.194042.1729@wb3ffv.ampr.org>

I also talked with both Buck Switzer and Les Shattuck about the resignation. As Doug said, Buck is taking the position of _Interim_ President, until a new one can be found, and he told me to keep on doing what I have been doing for a bit over 2 years now: beating the bushes for anyone interested in assuming the job of President of the QRP ARCI. I have talked to quite a few dozen QRPers in that time, some very well known, some little known, and all have declined so far. The standard offer still applies: the job is open to anyone who wants it, subject, of course, to approval by the Board of Directors. I am "offering" the job to anyone who wants it. (By the way, contrary to popular belief, I am not a committee of one who does all appointing in the club, although that impression is perhaps understandable. I did recruit a new technical editor for the QRP Quarterly--two in a row--as well as a new features editor, and have been "offering" the job of President for 2 years. However, something I seldom, if ever, mentioned in any of these was that I was always in close coordination with the sitting president at all times, and everything was done with approval beforehand. That is still that case--I am "offering" the position of President to anyone with the approval of the new Interim Pres. And I do not give it away, either--I simply try to find sparks of interest, and when I find someone truly interested I will pass their name to the Pres, and that person will only get the job through proper procedures, ie, winning a majority vote of the board of directors.) I will pass along the text of Les' resignation later when I get a chance to type it up (he gave me permission to post it publicly). 73 and Queue Our Pea
DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-1@netcom.com Tue Mar 14 13:59:44 1995
Date: Tue, 14 Mar 1995 07:40:19 -0500 (EST)
From: Sherwood Probeck <sprobeck@netaxs.com>
Subject: Re: NN1G Mark II RIT?
Message-Id: <Pine.SUN.3.91.950314073452.27375A-100000@unix1.netaxs.com>

Greetings!

Just last week I received a letter from Small Wonder Labs (Dave Benson)
He states that he currently offers a RIT modification kit for the XX-40
series of transceivers. I suggest writting to him (e-mail), he's also
here on the list.

I'm going to be ordering one of his great little rigs soon! Can't wait
to build again :')

72/73 de KE3MI

```
=====
Sherwood R. Probeck, KE3MI      "What hath God wrought." Samuel Morse, 1844
ex KB2MOQ, N2NFE and KF2EP      Morse Code - Try it, You'll like it!
=====
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```
Remsen Computer Services
Sales, Service, Data Recovery      Office: 610-594-1827
and Preventive Maintenance        Fax: 610-594-8594
=====
```

On Mon, 13 Mar 1995 tbowman@leba.net wrote:

> Dan of Dan's Small Parts fame does not have the RIT circuit
> for the NN1G Mark II. I must have misread a posting on the list.
> Anyone know where I can find the RIT circuit for the rig??
>

From owner-qrp-l@netcom.com Tue Mar 14 09:53:00 1995
Date: Tue, 14 Mar 95 07:11:27 EST
From: hysell@kodak.com (John D. Hysell)
Message-Id: <9503141211.AA23609@runner.itc.Kodak.COM>
Subject: Oops - wrong rig name

I messed up in my earlier post about the kit my friend wants to sell;
It's an EPIPHYTE SSB transceiver; NOT the NEOPHYTE super-regen receiver.
-sorry for the mixup.
73 de KF2XC
-John

From owner-qrp-l@netcom.com Tue Mar 14 15:14:00 1995
Date: Tue, 14 Mar 1995 10:16:05 -0800 (PST)
From: "John D. Spittle" <jds@freenet.vancouver.bc.ca>
Subject: Re: Oops - wrong rig name
Message-Id: <Pine.3.89.9503141033.A9302-0100000@freenet.vancouver.bc.ca>

On Tue, 14 Mar 1995, John D. Hysell wrote:

> I messed up in my earlier post about the kit my friend wants to sell;
> It's an EPIPHYTE SSB transceiver; NOT the NEOPHYTE super-regen receiver.
> -sorry for the mixup.
> 73 de KF2XC
> -John

The NEOPHYTE is a DC receiver NOT a SUPER-REGENERATIVE receiver!!

72 Derry VE7QK

>

From owner-qrp-l@netcom.com Tue Mar 14 15:05:47 1995
Date: Tue, 14 Mar 1995 11:12:05 EST
From: "BOB SCHNICK, DIRECTOR, LECOM LIBRARIES" <schnick@shrsys.hslc.org>
Message-Id: <0098D584.E76B75DF.17@shrsys.hslc.org>
Subject: Operating in VE7-Land

I will be travelling to Vancouver, BC in June for a conference and
I just wanted to know if anyone on the list has any experience
to share regarding operating from our northern neighbor. At present I
am planning on taking just a 30 meter rig and accessories.

Any thoughts, comments will be appreciated.

72 KA3YJG QRP: Brains over Brawn

From owner-qrp-l@netcom.com Tue Mar 14 13:36:46 1995
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>
Date: Tue, 14 Mar 1995 16:13:59 MET
Subject: Performance test QRP+
Message-Id: <449A9465B8@daphne.rrze.uni-erlangen.de>

Hi gang,

Roeland, PA0RBC, sent me some measurement results on the QRP Plus
transceiver from Index Labs via PR and explicitly permitted its
distribution to QRP-L. I don't own this type of rig yet, but I am very
interested, and so is probably half of the list, considering the recent
group purchase.

Please take the info as it is. I am not the one who did the measurements
and I am not in a position to check them.

Vy 72 de Richard Hieber, DL8MFQ/AA8CP
sz0026@daphne.rrze.uni-erlangen.de

PA0RBC > DL8MFQ 09.03.95 23:38 227 Lines 9911 Bytes #180 @DB0SIF.#HES.DEU.EU
Subj: PERFORMANCE TEST QRP+
Path: !DB0SIF!DB0GV!DB0LJ!DB0SGL!DB0END!DB0ACC!PI8DAZ!PI8MBQ!PI8DHR!

Sent: 950309/2138Z @:PI8DHR.#NH1.NLD.EU #:34703 [DEN HELDER] \$:34703_PI8DHR

>From: PA0RBC@PI8DHR.#NH1.NLD.EU
To : DL8MFQ@DB0SIF.#HES.DEU.EU

Hello Richard, last Monthday I did some measurements on the plus.
The day after, Robert, PA3BHK did send me a suggested modification
he have got via Bruce fm Index to suppres the harmonics above transmitting
then 30m band, but the spurious is strange enough several MHz below the
transmitting freq. Possible coming fm downmixing?
Okay, it stay a nice trcvr and the solutions will come from the hams also
to Bruce.
Read!:

Performance Test Index Laboratories QRP + trcvr, serialno. 432

Freq. KHz	! 12Vbattery ! Pcw	Ib	! 13.5 Vbattery ! Pcw	Ib	! SINAD ! 10dB(uV)	! Freq. dev. ! display freq.	! Harmonics ! & Spurious
1950	5.65	1.2	! 7.83	1.4	! 0.567	! 44	! -48 dB
3560	5.96	1.2	! 7.52	1.4	! 0.521	! 18	! -57 dB
7030	6.18	1.32	! 8.95	1.68	! 0.443	! 40	! -42 dB
10130	7.93	1.32	! 10.00	1.5	! 0.475	! -40	! -22 dB
14060	6.00	1.32	! 10.00	1.75	! 0.484	! 40	! -32 dB *
18130	4.63	1.32	! 8.02	1.75	! 0.494	! - 5	! -28 dB *
21060	3.64	1.32	! 4.88	1.55	! 0.494	! 106	! -30 dB *
24920	4.74	1.32	! 7.4	1.62	! 0.500	! -30	!
28060	3.6	1.32	! 6.21	1.60	! 0.535	! 28	! -25 dB *
28900	3.39	1.32	! 5.89	1.58	! 0.529	! 28	! -25 dB *

- Frequency accuracy measured direct after switching
from memory to memory without finetuning with the big knob.
The receiver comes always on the same freq. if you do that, nice to
find fixed freq. channels as beacon freqs.
- Phasenoise let the synthesizer go about 2 Hz up and down during short times.
- The given harmonics and spurious in the table are the most
bad level measured.
- (*) Spurious below Transmitting frequency.

Nearby SSB (A3J) measurements in a 10 KHz Span, BW 100 Hz, VBW 10 Hz.

Reference: single tone 800 Hz power max. 34 dBm (2.5 W)/80 meter band.

- Microphone input impedance measured for 1000 Hz is 600 ohm.
- Minimum inputpower for maximum RF power: -53 dBm (10 mVtt/1 KHz).

- Carriersuppression -28 dB below single tone.
- Created 3th order products -48 dB below single tone.
- Created 5th order products -68 dB below single tone.

Reference: double tone 800/2200 Hz, each tone +30 dBm (1W).

- Carriersuppression -23 dB below the 2-tones.
- Between the 2 tones an unknown signal -18 dB below the 2 tones.
- Created 3th order products -32 dB below 2 tones.
- Created 5th order products -48 dB below 2 tones.

The ALC keeps the outputpower and products around the same level if you try to overdrive the microphone level.

Automatic Gain Control.

Measured on 14100 KHz increasing the R.F. signal from 1uV (-107dBm) to 10mV (-27dBm) gives an increase of 4 dB. Also a signal of 1.26V (+15dBm) don't give audio distorsion. AGC works very good with a slow decay of about 1 second.

Maximum audio output 1000 Hz.

The maximum audio measured over the 8 ohm speaker is 1.65 V (340mW). Maximum audio over the external phone jacket 3.2 mm is 10 mW//3 ohm.

SCAF-filter.

Measuring the maximum audio obtained during the settings below:

Bandwith Peaking on

100 Hz	600 Hz	Don't select a bandwith smaller then 300 Hz if
200 Hz	650 Hz	like to hear a beatnote of 800 Hz or higher.
300 Hz	700 Hz	Bandwiths > 300 Hz are okay for 800 Hz tone.
500 Hz	680 Hz	

For example in my case: If you like to hear the 14.100 MHz beacon-chain you read in the freq. display 14099.4, then you can hear on all bandwiths the 600 Hz beatnote well.

S-meter accuracy: Measured on 14100 Khz nearly same results on 3560 KHz.

S1		S4 10	dBuV	S7 23.1	dBuV	The figures are in dB over
S2	3.4	dBuV	S5 14.5	dBuV	S8 26.8	1 uV signal.
S3	6.3	dBuV	S6 19.1	dBuV	S9 31.9	dBuV

Strongsignal mixing products Fant 14.1 MHz 10mV (-27dBm).

Under and below the receiving freq. you hear birdies on 14.102, 14.109

14.114, 14.121 also in the same ratio below 14.1 MHz.

Unwanted radiation on the Antenna S0239 connector during receive.

Signals of -52 dBm and lower are detectable in the range from 1-500 MHz.

Break-in (QSK) during CW.

You can good hear 'dit and dah' between your own CW-transmissions.

Remarks:

It is advisable to use specially for frequencies 10 MHz up a high-Q bandpassfilter to suppress unwanted radiations.

Also Magnetic loop or Toroidal antennas (see Radio Communications April 1994, page 13 etc.) are preferred.

Used Measuring equipment:

-
- Rohde&Schwarz Radiocommunication analyzer 0.1...1000MHz, CMTA54.
 - Racal-Dana 9083, 2-tone signal source.
 - Hewlett Packard HP8568B Spectrum Analyzer.
 - Two coaxial power-attenuators 20 dB.

'73 es '72 fm PA0RBC@PI8DHR.NLD, Roeland, Den Helder, March 1995.

Hello Peter, I've got these article via Robert, PA3BHK who did write letter to Bruce.

>From Index, KG7CR to PA3BHK to PA0RBC near an idee of N6CM.

Dear Mr. Van der Zaal (PA3BHK):

Thank you for your letter regarding the QRP Plus transceiver.

We are working to improve the second harmonic rejection on the three upper bands. I enclose schematics of filters which we plan to use in future production. They meause at least -48dbc for second harmonic.

I am not sure about the non-harmonic spurs. We have seen some if the CW power is turned up high (7 or 8 Watts) causing the final to be overdriven.

We are working on a new prom which will include smaller keyer speed steps. I will write when it is ready.

The signal on the top PCB is about 40mW. It should be a good place to connect a transverter.

Sincerly, Bruce Franklin.

The change is not too difficult to implement on the existing PCB. The steps are as follows.

- Replace L11 with 2 100nh chokes in parallel.

- Lift C41 and C42 leads from the pads where they join and insert 330 pf between the two caps and the PCB.
- Install a 470 pf NPO with very short leads (I used a chip) from the IF terminals of U3 and GND.

>From N6CM, Robert E. Friess to Bruce Franklin fm Index.

More Harmonics.

As supplied the harmonic performance of the radio is pretty marginal as shown in the preceding tables. In analysing the 3 highest frequency lowpass filters. I found that the attenuation at the 2nd harmonic was not as high as it could be and that the cutoff was very close to the desired output frequency increasing loss and probably, with component tolerance variation, a production problem with some radios.

I redesigned each of the filters as Cauer filters which provide zeros of transmission. With the resultant steeper attenuation slope.

I was able to move the cutoff out a little which reduced insertion loss and in production would be an easier design to reproduce. The before and after performance is given in the table below.

Band (MHz)	Pwr Out (Wtts)	PwrOut (Wtts)	2nd Har(dBc)	2nd Har(dBc).
	Before	After	Before	After
10.1	9	13	-30	-55
14	7	8	-48	-48
18	9	10	-30	-42
21	7	8	-40	-40
24	7.5	7	-35	-50
28	5	5	-45	-55

All measurements were made with CW pwr turned all the way up and if the power were readjusted the same as before the improvement would be even greater because of less distortion in the amplifier.

The changes are simple, I would be glad to provide you with documentation if you are interested.

That still leaves the problem with the tone in the audio. I haven't figured that one out yet. Also, I believe that it would be pretty easy to activate the ALC for CW. I'll let you know if it works.

```

0--!-----18pf----!----- 47pf----!-----0
!-----300nh----!----- 210nh----!
10/12 M  68pf    7T    140pf    6T    47pf    LPF1B
!
0-----0

```

```

0--!-----22pf----!-----68pf----!-----0
!-----390nh----!----- 270nh----!
15/17 M 100pf    8T    180pf    6.5T  56pf    LPF2B
!

```

```

0-----0

0--!-----68pf----!-----220pf----!-----0
   !-----520nh----!-----300nh----!
20/30 M  100pf    10T   180pf    7T   56pf    LPF3B
         !               !               !
0-----0

0--!-----22pf----!-----68pf----!-----0
   !-----420nh----!-----330nh----!
15/17 M  120pf          220pf          100pf    LPF2C
         !               !               !
0-----0

```

'73 fm Roeland PA0RBC @ PI8DHR, March 7, 1995, Den Helder.

P.S.:

No problems with audio pop of the agc, works well.

Birdies are detectable on dummyload but weak and acceptable, must still check all bands Richard.

I did not yet try out the Iambic keyer.

TX outband transmissions are not possible.

Waiting with mods (1 year guarantee)

Till so far, shall check your questions again but do read it now to adres this message to you.

Bye Richard '73 fm Roeland.

From owner-qrp-1@netcom.com Tue Mar 14 15:38:33 1995

Date: Tue, 14 Mar 1995 12:41:42 -0700

Message-Id: <199503141941.AA01048@teal.csn.org>

From: bcutter@teal.csn.net (Bob Cutter)

Subject: QRP Afield

The NorCal Qrp Afield(1 April, 1600-2400z) sounds like great fun. We will still have snow here in Colorado but I will be out.

72, Bob KI0G

From owner-qrp-1@netcom.com Tue Mar 14 13:48:33 1995

From: Byron8LCZ@aol.com
Date: Tue, 14 Mar 1995 12:52:16 -0500
Message-Id: <950314125214_49184833@aol.com>
Subject: Re: QRP+ Questions

Phone nr for Index labs is 206-851-5725
addr is: 9318 randall dr nw, gig harbor wash 98332

the RIT on the QRP Plus is continuous. you can tune the entire band with RIT and still return to your xmit freq. Its the best RIT, I've ever used. Its one of the Hidden features of the Plus, not mentioned in the ads.

72, Byron WA8LCZ

From owner-qrp-l@netcom.com Tue Mar 14 21:33:47 1995
Message-Id: <v01510104ab8b9628d9e1@[149.82.22.63]>
Date: Tue, 14 Mar 1995 11:21:36 -0800
From: xenolith@halcyon.com (Kevin Purcell)
Subject: Re: QRP+ Questions

>2) Is it true that QRP+ has no RIT?

It has no seperate RIT control but it does have RIT.

When you flip the switch to RIT mode (choice of NORMAL/RIT/SPLIT) the TX frequency stays fixed at the last value and the frequency of the RX can be shifted.

I prefer this UI. It eliminates some of the usual RIT problems (such leaving your RIT on whilst tuning the TX around).

Kevin Purcell, N7WIM // work: kevinpu@atm.com // home: xenolith@halcyon.com
| "The best way to get information on
Join Seattle's dBug Mac Developers SIG | UseNet isn't to ask a question
and meet other Mac programmers! | but to post the wrong information"

From owner-qrp-l@netcom.com Tue Mar 14 21:23:10 1995
From: lhalliday@creo.bc.ca
Date: Tue, 14 Mar 95 10:17:17 PST
Message-Id: <9502147952.AA795205037@mail.creo.bc.ca>
Subject: Re[2]: Schematics via inet

John S. writes:

> I have wondered if EPS (Encapsulated PostScript) would not be an
> option? This is used for graphics to be placed into a document, such
> as a page layout program. Advanced word processors can place and
> display these (Mac does, PC/Windows also?), or a page layout
> program, or various other options (my version of Filemaker Pro will
> do it!)

No. What you see is the screen preview provided by whatever program
created the EPSF in the first place. In the PC world it's a TIFF
image, while on Macs it's a PICT resource. In the absence of a preview
image (or Display PostScript), all any program will show you is a
rectangle showing the image dimensions.

Since I do lots of work (i.e. the kind I get paid for) with
PostScript, I have a powerful PostScript interpreter on my Windows NT
machine (a 486) and can preview all kinds of stuff, or write the
results to TIFF files. You don't want to know how much it costs to
play with Harlequin's technology, and I couldn't tell you anyway. :-)

73 from Burnaby,
laura VE7LDH who also has a Mac on her desk and really prefers to
program it instead

From owner-qrp-l@netcom.com Tue Mar 14 09:14:04 1995
From: ab4el@cybernetics.net (Stephen Modena)
Message-Id: <9503141122.AA04757@cybernetics.net>
Subject: SSB Fox Hunt reminder
Date: Tue, 14 Mar 1995 06:22:01 -0500 (EST)

A short reminder that the fox hunt is tonight:

> Here's the sched:
> [SSB QRP FOX HUNT: Tuesday March 14. ALL TIMES ARE EST]
>
> 09:00pm - 09:30pm 7.225 - 7.230 NO LOWER
> 09:30pm - 10:00pm 7.210 - 7.220
> Band switch time.
> 10:00pm - 10:30pm 3.780 - 3.788
> 10:30pm - 11:00pm 3.905 - 3.910
>
> N8VAR Ron Doyle

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From owner-qrp-l@netcom.com Tue Mar 14 13:38:50 1995
Message-Id: <n1416940845.32888@msmailgw1.arlut.utexas.edu>
Date: 14 Mar 1995 11:45:37 -0600

From: "rohre" <rohre@msmailgw1.arlut.utexas.edu>
Subject: Ten Tec Scout and Argo mixing Freqs.

Mike here are the frequencies per manual:

1. PT0: Tunes 2.2 M Hz to 2.7 except on 160M where it goes 2.5 to 2.7 to stay out of the band.

2. IF is 6.144 M Hz

3. The mixing products appear as $2f_{x0} + 2f_{pto} - f_i$ where f_i is 6.144 M Hz, and of course f_{pto} is nominally 2.2 to 2.7 as stated. This equation will give you the spurious products that could happen.

4. there is a 3 M Hz LP Filter in the PT0 output line that goes through the plug in. However, on 160 this is replaced in that module by a 2.5 M Hz high pass filter.

5. Crystal frequencies by band: 160M uses 5.444 M Hz

	80
7.444	
	40
10.944	
	30
13.944	
	20
5.656	
	17
9.656	
	15
12.656	
	12
16.156	
	10
a19.656	

b20.156

For those not familiar, 10 meters is switch selected on the module to cover 28.0 to 28.5 or 28.5 to 29.0. It looks feasible to modify a ten meter plug in module to cover the next segment if the crystal was changed, thus giving receive ability on the satellite down link frequencies on 10 meters. (29.0 to 29.5 Mhz).

Hope the above is helpful to those experimenting with frequency coverage.

--Stuart K5KVH

From owner-qrp-1@netcom.com Tue Mar 14 08:39:08 1995
From: JimN0OCT@aol.com
Date: Tue, 14 Mar 1995 07:45:27 -0500
Message-Id: <950314074526_48939676@aol.com>
Subject: Re: VHF Baluns

Hi Peter--

I have used the little binocular balun ferrites found in the backs of VCR's etc. (not really sure what you mean by cable TV baluns). I'm currently using one as a power splitter in a txcvr I'm building. Although many will swear upon heaps of old QST's, Ham Radio Magazines, etc. that one can never be **absolutely** sure about unmarked ferrites, I think one can usually spot type 43 (which is what I'm 99 & 44/100% sure these suckers are made of). Type 43 just LOOKS a lot different than the other ferrite materials. Kinda sparkly. Kinda special.

I would suggest winding some windings and try them out. If they don't work, sell them as VHF bartenderators or some such hokum.

73, Jim N0OCT

From owner-qrp-1@netcom.com Tue Mar 14 16:43:32 1995
From: JEVERHART@cayman.VF.MMC.COM
Date: Tue, 14 Mar 1995 10:35:37 -0500 (EST)
Message-Id: <950314103537.22e304a2@carib.vf.mmc.com>
Subject: RE: VHF Baluns

Peter, you queried:

> Just wondering if anyone has tried using those cheap cable tv baluns on
> HF?
> Regards,
> Peter N2KPY

and Jim, N0CT replied:

> I have used the little binocular balun ferrites found in the backs of VCR's
> etc. (not really sure what you mean by cable TV baluns). I'm currently
> using one as a power splitter in a txcvr I'm building. Although many will
> swear upon heaps of old QST's, Ham Radio Magazines, etc. that one can never
> be **absolutely** sure about unmarked ferrites, I think one can usually spot
> type 43 (which is what I'm 99 & 44/100% sure these suckers are made of).
> Type 43 just LOOKS a lot different than the other ferrite materials. Kinda
> sparkly. Kinda special.

> I would suggest winding some windings and try them out. If they don't work,
> sell them as VHF bartenderators or some such hokum.

> 73, Jim N0OCT

I want to beat the drum some more for a favorite technique of mine. You can measure the baluns and ASSURE YOURSELF THAT THEY WILL WORK!

To do this, you simply measure the impedance of the windings in question either directly or indirectly. I won't go into the internal mechanics of the baluns, as that has been done both here and in several excellent publications by Jerry Sevick, Wes Hayward, Doug Demaw and lots of others. A pretty good idea of a balun's worth for QRP amateur radio applications can be gotten by just measuring it as an inductor. The following ASCII sketch shows the balun as an impedance transformer:



A crude rule of thumb is that the impedance of a winding must be at least 4 times the impedance it will see at the lowest operating frequency (I like ten times). In the above picture, a tv balun is to be checked out for use at hf. AT VHF the "LO Z" side would see 75 ohms and the "HI Z" side would match 300 ohms. The ratio of resistances is set by turns ratios inside the device. The operating impedance level is really set by the characteristic impedance of the windings but can often be ignored. So potentially the balun can be used to transform 50 ohms to 200 ohms. So you can get some idea of the usability by measuring the impedance of the windings as inductors.

For various reasons, the LO Z side is probably easiest to measure. Using an inductance measuring device you can check the inductance at the operating frequency, then calculate the impedance using the familiar formula:

$$Z = XL = 2 * PI * F * L$$

A more direct way is to measure the impedance directly at the operating frequency using an impedance bridge or antoher device such as the Autek RF-1 ANALYST, or an MFJ SWR analyzer with "rf resistance" capability.

Just be sure that the impedance is at least 4 times the resistance level for the winding at the LOWEST operating frequency. Only one winding must be checked. If it is ok, the transformer's turns ratio will probably ensure that the other winding is adequate.

If you are adventurous (and I hope you are), you can use the balun core to wind your own. Just check the impedance of one of the windings as described above to be sure that the balun will work.

Purists will no doubt say that this method is not exact. They're right, but it should get you in the ballpark for most low power usage over a few ham bands.

Try it and enjoy - Love my RF-1!

72/73,

Joe E. N2CX

From owner-qrp-1@netcom.com Tue Mar 14 18:06:36 1995
Message-Id: <v01510107ab8b98826748@[149.82.22.63]>
Date: Tue, 14 Mar 1995 11:22:36 -0800
From: xenolith@halcyon.com (Kevin Purcell)
Subject: Re: VHF Baluns

>Although many will
>swear upon heaps of old QST's, Ham Radio Magazines, etc. that one can never
>be *absolutely* sure about unmarked ferrites, I think one can usually spot
>type 43 (which is what I'm 99 & 44/100% sure these suckers are made of).
> Type 43 just LOOKS a lot different than the other ferrite materials. Kinda
>sparkly. Kinda special.

Because it's not a ferrite -- it's powdered iron!

Kevin Purcell, N7WIM // work: kevinpu@atm.com // home: xenolith@halcyon.com
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and meet other Mac programmers! | but to post the wrong information"

From owner-qrp-1@netcom.com Tue Mar 14 20:19:36 1995
From: JimN00CT@aol.com
Date: Tue, 14 Mar 1995 18:38:59 -0500
Message-Id: <950314183857_49518610@aol.com>
Subject: Re: VHF Baluns

>Although many will
>swear upon heaps of old QST's, Ham Radio Magazines, etc. that one can never
>be *absolutely* sure about unmarked ferrites, I think one can usually spot
>type 43 (which is what I'm 99 & 44/100% sure these suckers are made of).
> Type 43 just LOOKS a lot different than the other ferrite materials. Kinda
>sparkly. Kinda special.

Because its not a ferrite -- its powdered iron!

HA! We're both wrong!! The data sheet I have says type 43 material is
NiZn--Nickel Zinc!

73, Jim N00CT

From owner-qrp-l@netcom.com Tue Mar 14 21:34:50 1995
From: rehm@zso.dec.com
Message-Id: <9503141853.AA26907@slugbt.zso.dec.com>
Subject: Re: VHF Baluns
Date: Tue, 14 Mar 95 10:53:08 -0800

> Hi Peter--

>

> I have used the little binocular balun ferrites found in the backs of VCR's
> etc. (not really sure what you mean by calble TV baluns).

I think he's referring to the 300-75 (4:1) ohm baluns that match 300 ohm
twinlead to 75 ohm coax. They typically have two screw terminals
for the VHF twin lead, (and sometimes two additional screw terminals
for the UHF loop), and one type F 75 ohm connector.

Are these VHF TV baluns an inexpensive choice for, say, a homebrew 2 M
(144-148 MHz) beam to be used at QRP levels (or in my case, solar radio
astronomy)?

And the original question I believe Peter posed was, are these baluns useful
for HF (1-30 MHz) at QRP levels?

/eric rehm
KJ7AE, Seattle

From owner-qrp-l@netcom.com Tue Mar 14 13:57:21 1995
From: Jack Ponton <jwp@chemeng.ed.ac.uk>
Date: Tue, 14 Mar 1995 13:58:37 GMT
Message-Id: <199503141358.NAA00861@aith.chemeng.ed.ac.uk>
Subject: visit to US

To any qrpers in the Boston area...

I'm going to be in the US next week in Cambridge and Boston Mass.

I have my reciprocal permit and will take a Mizuho 40m handy with a crystal
for 7280-7297 and try to do some qrp ssb using the 4 foot whip which
comes with the radio. This will not let me work much DX

Can anyone tell me if:

There is anything interesting radio-wise in the Boston area over the weekend (evening of the 24th to afternoon of the 26th March) ?

There are any good ham stores, especially where I might get qrp related items, in the area?

One thing I will need if I use the radio much is a 9/12 volt switchable a.c. eliminator/charger. This sort of thing should be available from Radio Shack I expect. Can anyone who knows the area tell me if there is one near the MIT campus?

Thanks and 72/3 de Jack gm0rwu/w1